



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

An ISO 9001
Company

ENQUIRY NOTICE INVITING TENDER	Phone: +91 431 257 76 53 Fax : +91 431 252 00 31 Email : skaruna@bheltry.co.in Web : www.bhel.com
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	Enquiry Number: 2711300008	Enquiry Date: 29.01.2013	Due date for submission of quotation: 28.02.2013
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You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order.
Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

Sl. No	Description	Quantity
1	Identification Marker (Stencilling) as per the technical specification, general guidelines instructions & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	01 No.

Important points to be taken care during submission of offer

1. Checklist to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. The EMD Amount for this Tender will be (INR) : 40,000.00
3. Delivery required 4 months from the date of purchase order.
4. All updates, amendments, corrigenda etc (if any) will be posted only on the above websites from time to time, as and when required, until tender is opened. There will be no publication of such updates, amendments corrigenda etc. through newspapers or any other media.

BHEL commercial terms & conditions with Price Bid and Bank Guarantee formats can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units) Bharat Heavy Electricals Limited page) under Enquiry reference above .

Tenders should reach us before 14:00 hours on the due date. Tenders will be opened at 14:30 hours on the due date Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

Manager / MM / Capital Equipment

A. NAGARAJAN
Manager
MM/Capital Equipment
BHEL, Tiruchy - 620 014.



1 GENERAL:

1.1 This document deals with requirements for submitting offers and executing the order on placement of Purchase order / Contract for the subject item. The equipment under this specification are required for stenciling specific details on surface of seamless steel tubes being manufactured in SSTP/BHEL, having outer diameter between 19 and 133 mm and thickness between 2.5 and 12.5 mm and length between 4 and 20 meters.

1.2 Bidders have to submit the offers as below by filling in the "Vendor's response" column with relevant information against each point in the respective sections below by providing information on model no, parameters etc.

1.3 Note: A just 'CONFIRMED' or 'COMPLIED' or 'YES' or 'NO-DEVIATION' or similar words in the "Vendor's response" column is not acceptable and may lead to disqualification of the Technical Offer.

1.4 Brand and model no. of the items offered must be indicated in the offer

1.5 The offer shall Consist of Sections:

1.5.1 Part A:

- a. General Requirements
- b. Technical offer
- c. Commercial terms and conditions
- d. Un-priced Price bid as per Part B (ie. Price bid as per list shown in Part B of this Specification with the price value blanked)

1.5.2 Part B:

Price bid for all items with split of major components:

Sl. No	Particulars	Qty	Rate
01			
02			
03			
04			
05			
06			
07			

1.6 Necessary Documents, records, drawings, catalogues as required shall also be referenced in the response column and attached with the offer.

1.7 The supplier may visit SSTP and understand the requirements before bidding.

1.8 The requirements to be met for submitting the offer and the execution of the order are laid out below.

2. QUALIFYING CRITERIA FOR THE SUPPLY

The VENDOR has to necessarily provide the following details, for making an assessment of the firm's capability and competency: [The VENDOR is expected to give complete details against each clause in the table given below and wherever necessary an additional sheet may be attached (giving clear reference number) to cover the required details]

Sl. No.	PARTICULARS	Vendor's response with ref. cl. No. of detailed offer.
1.0	Number of Years of Experience of the VENDOR in the field of design, manufacture and supply of Stenciling machines	
2.0	YEAR of LAUNCH of the Model quoted against this ENQUIRY	
3.0	Is there any other model launched after the quoted Model? Why it is not quoted. Otherwise, indicate the likely year in which the next model is likely to be launched	
4.0	Number of Stenciling machines supplied, installed and commissioned till date for companies within INDIA: Attach list of organizations with model and contact address.	
5.0	Confirmation to performance testing requirement of the equipment prior to dispatch from supplier's end	
6.0	Details of Quality System followed (Kindly furnish the salient aspects of the QA system followed)	
7.0	Details on SERVICE-after-SALES Set-Up in India including the addresses of Agents/Service Centers in India and Asia	
8.0	Any Additional Data to supplement the manufacturing capability of the VENDOR	

2.1. The VENDOR has to compulsorily meet the following requirements to get qualified for submitting an offer for this equipment. Confirmation against each clause is to be indicated in the space provided.

Sl. No.	REQUIREMENTS	Vendor's confirmation and ref. to detail enclosed
9.0	The VENDOR shall have a minimum of <u>FIVE Years</u> of Continuous Experience in the Design, Manufacture & Supply of Stenciling machine. Indicate the actual experience.	
10.0	The VENDOR shall have supplied at least 2 number of the offered model, within the last five years. The equipment shall be working satisfactorily at least for the past 2 years. Indicate the number of equipment (of QUOTED MODEL) sold in India & Other Countries.	
11.0	Reference List of Customers with full details of the customer's CONTACT PERSON for cross reference by BHEL shall be provided. Proof of performance of the offered equipment shall be provided in the offer based on similar systems supplied to other customers by way of certification of performance from 2 customers or by spot visit	

2.2 The VENDOR has to comply with the following, for accepting the Technical Offer for scrutiny by the Purchaser. Confirmation against each clause is to be indicated in the space provided.



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Sl. No.	REQUIREMENTS	Vendor's confirmation and ref. to detail enclosed
12.0	The Technical Offer shall be supported by Product Catalogue and Data Sheets in ORIGINAL and complete technical details of 'Bought-Out-Items' with copies of Product Catalogue and Selection Criteria	
13.0	The Commercial Offer (given with the Technical Offer – Part I) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation of Scope of Supply.	
14.0	The points confirmed by the supplier based on the clarifications sought for the original offer shall be incorporated in the revised final offer wherever applicable. Pl. confirm	
15.0	The Vendor shall provide a complete list of out sourced electrical, electronic and mechanical components with Source name, Model no., Specification and drawings	

Technical Requirements:-

S. No	REQUIREMENTS	Vendor's Response
3	Job Details	
	Seam less steel tubes manufactured will be traveling on a tube conveyor (as shown in sketch on last page) one by one with a gap between each tube of about 200 to 1000mm. As the tube travels on this conveyor, stenciling should be done detailing manufacturer and tube details on each and every tube using a non contact stenciling machine using pigmented ink. After stenciling, the tube will be passed on conveyor for next operation.	
3.1	Job Dimensions and marking details	
	Tube sizes to be colour coded: OD 19 to 133 mm. Thickness of tubes : 2.5 mm to 12.5 mm Length of tubes: 4 to 20 meters. Colour of stencil: White Colour and should be able to change to any other colour on requirement speed of tube travel: 0.3m/s to 2 m/s font of stencil : 0.8 to 30 mm depending on tube size Medium of printing pigmented ink Rate of output: 1000 tubes per shift of 8 Hrs. (operation in 2 or 3 shifts)	



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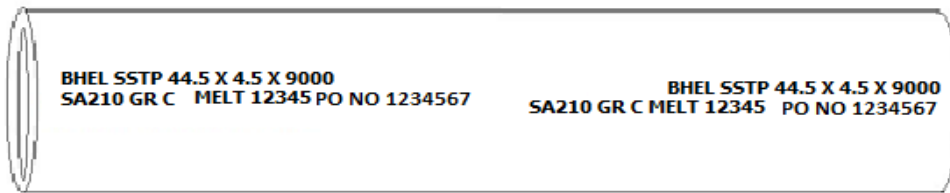


Figure 1

3.2	The stenciling paint should stick on to slightly wet tubes after coming from previous operation. The stenciling should be clear and should not get smeared off easily.	
3.3	The machine should be capable of stenciling details at leading end, at tail end or centre of tube or throughout length of tube with selectable gap. Selectable print delay should be possible using encoders or sensors to adjust the start of print. Variable speed printing should be possible on same tube varying from 0.3 m/sec to 2 m/sec	
3.4	The machine should be able to stencil letters of print height from 3mm to 30mm and variable print letter width. A combination of alphabets, numbers, variables and symbols should be possible on the same print line.	
3.5	The machine should have a monitor connected to a keyboard and mouse which gives input on what is to be printed. It should also have a recording system capable of recording stenciling details and should be retrievable and editable as required. The monitor should show what is going to be printed without any deviation from actual print.	
3.6	The machine should be having an inbuilt flushing system or any anti clogging mechanism. Even when machine has not been used for some significant period, the system should be able to function properly without delay and resume stenciling operations.	
3.7	The system should be capable of operating independently and should have provision to work together with the existing online systems.	
3.8	Pneumatic - Compressed air at 5 bar max. pressure will be provided by BHEL for the spraying device and cleaning nozzles if required. Necessary filtering unit, drying unit and control system shall be part of the supply.	



3.9	<p><u>Electric Equipment:</u> The unit shall work in 230v AC. The stenciling unit shall have a set of switch cabinets, terminal boxes, motor protection system, necessary cooling system etc. suitably integrated with digital communication system and computerized operation using reputed make of subsystems.</p> <p>The operator desk must include the following parts:</p> <ul style="list-style-type: none">- PC with keyboard, mouse and TFT screen.- Push buttons:<ul style="list-style-type: none">• Emergency Stop• Control voltage ON/OFF• Signal lamp for error <p>With the PC, the operator can work in manual and automatic mode.</p> <p>In Manual mode- every single step of the machine can be operated separately via commands from the PC. The operator has to select the commands with the mouse on the screen.</p> <p>The working positions of the different devices are to be controlled by sensors, in order to prevent damages.</p> <p>In Automatic mode-Programmed for fully automatic stenciling cycle. Automatic mode will started by pressing the START button and will be stopped anytime by pressing the STOP button.</p>	
3.10	<p><u>Documentation</u> - The documentation shall be supplied three-fold on paper and one-fold on CD-Rom in English language consisting of the following:</p> <ul style="list-style-type: none">machine erection and general noteserection manual, assembly drawing and part listsgeneral description of function and function cyclemaintenance instructionslubrication instructionsoperating instructionscircuit diagram, cable list, etc.hydraulic and switch planspart list and wear part listFinal foundation drawings, which contain all sizes, cable channels and load indexes and final layout drawings of the plant <p>The documentation on CD-ROM shall be in the following format:</p> <ul style="list-style-type: none">Documents and lists in PDF formatDrawings in DWG formatLayout and foundation plan in DWG format	



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4	Scope of supply	
4.1	Supply, installation & commissioning of automatic paint system. This may consist of: Paint reservoirs for paint, Solvent reservoir, Pneumatically Driven Paint Transfer Pump in required nos. with Suction Hose and Air Filter Regulator, Low Pressure Paint Filter, Low Pressure Paint Regulator 0-5 bar with gauge and Low Pressure Paint Tube.	
4.2	PLC Based Control system with necessary sensors to detect entry and exit of tube and start / stop stenciling accordingly. This may include necessary controls for operation of reservoir, control valves etc.	
4.3	Since the system involves quick drying paint, the technology and mechanics for preventing clogging of tubing, nozzles, filters paint gun etc. The unit should be dust proof and water proof.	
4.4	Service and user manuals along with list of spares catalogue to be supplied.	
5	General requirements:	
5.1	The floor space requirement and foot print layout, schematic drawing and operational features shall be provided in the offer.	
5.2	Supplier shall provide list of bought out items separately with model no. and maker for major items like motor, Pneumatic cylinder, Solenoid valves, filters, guns etc.	
5.3	Supplier shall prepare quality plan covering major items indicating critical quality characteristics, method of measurement, reference standard and acceptance norms and submit to SSTP/BHEL before starting the manufacturing activities.	
5.4	With respect to point 3 above, proof of performance of the offered system shall be provided in the offer based on systems supplied to other customers by way of certification of performance or by spot visit.	
5.5	The system performance shall be checked at BHEL after installation on a set of tubes of 3 different Diameters covering the entire range of tube sizes. Parameters like uniformity of width, alignment, coating thickness etc. has to be demonstrated.	
5.6	Service shall be provided by the supplier during guarantee period and also later through AMC. The system supplied must be supported by way of spares, availability and service for a minimum period of 10 years.	
5.7	List of spares with part identification no. (Tools, Mechanical, Electrical & Electronics) to be maintained for ensuring continuous operation with least delay time shall be provided in the offer with price. Details of White Pigmented ink being used for this stenciling operation to be enclosed.	



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6	Installation, Performance & Acceptance Of The System	
6.1	The system shall be installed and commissioned by the manufacturer of the system.	
6.2	The system performance shall be checked on a set of tubes, which will be provided by the supplier in for different lengths, diameters and grades of material.	
6.3	Service shall be provided by the supplier during guarantee period and also later through AMC. The system supplied must be supported by way of spares, availability and service for a minimum period of 15 years.	
6.4	Remote troubleshooting from Suppliers works is to be provided through ISDN-modem / Ethernet connectivity.	
6.5	Guarantee for the trouble free performance of the system shall be provided for min. 2 years for 3 shift operation. This shall be by way of performance Bank guaranty as applicable. The guarantees of the seller refer to: Quality of stenciling, life of spray gun, non clogging of gun unit and any other aspect agreed upon.	
7	Training and Documentation:	
7.1	Supplier shall provide operational and first level system maintenance training for 8 persons for operation and maintenance at BHEL.	



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8 <u>The Following commercial points also may be confirmed.</u>			
S.No.	Description	BHEL Offer / Requirement	Vendor's confirmation
01	DELIVERY	4 Months from the date of Letter-of-Intent	
02	INSPECTION	Will be carried out at BHEL and the Performance test is to be witnessed by BHEL Official.	
03	WARRANTY	The equipment shall be warranted for a minimum Period of 12 months from Commissioning or 18 Months from the date of dispatch whichever is earlier	
04	TRAINING	Refer Clause 7.0	
05	PERFORMANCE	As per BHEL tender specifications	

